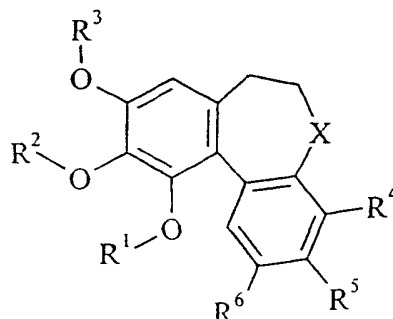


CLAIMS

1. The use of a compound of the formula I:



(I)

wherein

X is

-C(O)-, -C(S)-, -C=NOH, or -CH(R<sup>7</sup>)- wherein R<sup>7</sup> is hydrogen, hydroxy, C<sub>1-7</sub>alkoxy, -OR<sup>8</sup> or -

- 10 NR<sup>8</sup>R<sup>9</sup> (wherein R<sup>8</sup> is a group -Y<sup>1</sup>R<sup>10</sup> (wherein Y<sup>1</sup> is a direct bond, -C(O)-, -C(S)-, -S-, -C(O)O-, -C(O)NR<sup>11</sup>-, -SO<sub>2</sub>- or -SO<sub>2</sub>NR<sup>12</sup>- (wherein R<sup>11</sup> and R<sup>12</sup>, which may be the same or different, each independently represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>10</sup> is selected from one of the following nine groups:

- 1) hydrogen, C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl, C<sub>1-4</sub>alkylY<sup>8</sup>C<sub>1-4</sub>alkyl wherein Y<sup>8</sup> is as defined herein, or  
15 phenyl,

(which alkyl, cycloalkyl, alkylY<sup>8</sup>alkyl or phenyl group may bear one or more substituents selected from:

- halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, carboxy, carbamoyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, phenyl, nitro, sulphate, phosphate,  
20

Z<sup>1</sup> (wherein Z<sup>1</sup> represents a 5-6 membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

- 25 oxo, hydroxy, halogeno, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>aminoalkyl, C<sub>1-7</sub>alkanoyl, cyanoC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkylsulphonylC<sub>1-4</sub>alkyl and Z<sup>2</sup> (wherein Z<sup>2</sup> is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms,

selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, halogeno, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>aminoalkyl, C<sub>1-7</sub>alkanoyl, cyanoC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl and C<sub>1-4</sub>alkylsulphonylC<sub>1-4</sub>alkyl)),

C<sub>1-4</sub>alkylZ<sup>1</sup> (wherein Z<sup>1</sup> is as defined herein), and

a group -Y<sup>2</sup>R<sup>13</sup> (wherein Y<sup>2</sup> is -NR<sup>14</sup>C(O)- or -O-C(O)- (wherein R<sup>14</sup> represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>13</sup> is C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl or a group R<sup>15</sup> wherein R<sup>15</sup> is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>aminoalkyl, C<sub>1-4</sub>alkylamino, C<sub>1-4</sub>hydroxyalkoxy, carboxy, cyano, -CONR<sup>16</sup>R<sup>17</sup> and -NR<sup>18</sup>COR<sup>19</sup> (wherein R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup> and R<sup>19</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl)));

2) R<sup>15</sup> wherein R<sup>15</sup> is as defined herein;

3) C<sub>2-7</sub>alkenylR<sup>15</sup> (wherein R<sup>15</sup> is as defined herein);

4) C<sub>3-7</sub>alkynylR<sup>15</sup> (wherein R<sup>15</sup> is as defined herein));

5) Z<sup>1</sup> (wherein Z<sup>1</sup> is as defined herein);

6) C<sub>1-7</sub>alkylZ<sup>1</sup> (wherein Z<sup>1</sup> is as defined herein);

7) C<sub>1-7</sub>alkylY<sup>8</sup>Z<sup>1</sup> (wherein Z<sup>1</sup> is as defined herein and Y<sup>8</sup> is -C(O)-, -NR<sup>59</sup>C(O)-, -NR<sup>59</sup>C(O)C<sub>1-4</sub>alkyl-, -C(O)NR<sup>60</sup>- or -C(O)NR<sup>60</sup>C<sub>1-4</sub>alkyl-, (wherein R<sup>59</sup> and R<sup>60</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl, C<sub>1-3</sub>hydroxyalkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl));

8) (C<sub>1-7</sub>alkyl)<sub>c</sub>Y<sup>9</sup>Z<sup>3</sup> (wherein c is 0 or 1, Z<sup>3</sup> is an amino acid group and Y<sup>9</sup> is a direct bond, -C(O)- or -NR<sup>61</sup>- (wherein R<sup>61</sup> is hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl)); and

9) C<sub>1-7</sub>alkylR<sup>15</sup> (wherein R<sup>15</sup> is as defined herein);

and R<sup>9</sup> is hydrogen, C<sub>1-7</sub>alkyl or C<sub>3-7</sub>cycloalkyl, which alkyl or cycloalkyl group may bear one or more substituents selected from C<sub>1-4</sub>alkoxy and phenyl);

R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are each independently

hydrogen,  $\text{PO}_3\text{H}_2$ , sulphate,  $\text{C}_{3-7}$ cycloalkyl,  $\text{C}_{2-7}$ alkenyl,  $\text{C}_{2-7}$ alkynyl,  $\text{C}_{1-7}$ alkanoyl, a group  $\text{R}^{20}\text{C}_{1-7}$ alkyl (wherein  $\text{R}^{20}$  is phenyl which may bear one or more substituents selected from  $\text{C}_{1-4}$ alkyl,  $\text{C}_{1-4}$ alkoxy,  $\text{C}_{1-4}$ aminoalkyl and  $\text{C}_{1-4}$ hydroxyalkoxy),  $\text{C}_{1-7}$ alkyl or  $\text{C}_{1-7}$ alkylsulphonyl

(which alkyl or alkylsulphonyl group may bear one or more substituents selected from:

- 5 halogeno, amino,  $\text{C}_{1-4}$ alkylamino,  $\text{di}(\text{C}_{1-4}$ alkyl)amino, hydroxy,  $\text{C}_{1-4}$ alkoxy,  $\text{C}_{1-4}$ alkylsulphanyl,  $\text{C}_{1-4}$ alkylsulphonyl,  $\text{C}_{1-4}$ alkoxycarbonylamino,  $\text{C}_{1-4}$ alkanoyl, carboxy, phenyl, nitro, sulphate, phosphate and a group  $-\text{Y}^2\text{R}^{21}$  (wherein  $\text{Y}^2$  is  $-\text{NR}^{22}\text{C}(\text{O})-$  or  $-\text{O}-\text{C}(\text{O})-$  (wherein  $\text{R}^{22}$  represents hydrogen,  $\text{C}_{1-3}$ alkyl or  $\text{C}_{1-3}$ alkoxy $\text{C}_{2-3}$ alkyl) and  $\text{R}^{21}$  is  $\text{C}_{1-7}$ alkyl,  $\text{C}_{3-7}$ cycloalkyl or a group  $\text{R}^{23}$  wherein  $\text{R}^{23}$  is a phenyl group or a 5-10-membered
- 10 aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino,  $\text{C}_{1-4}$ alkyl,  $\text{C}_{1-4}$ haloalkyl,  $\text{C}_{1-4}$ alkoxy,  $\text{C}_{1-4}$ hydroxyalkyl,  $\text{C}_{1-4}$ aminoalkyl,  $\text{C}_{1-4}$ alkylamino,  $\text{C}_{1-4}$ hydroxyalkoxy, carboxy, cyano,  $-\text{CONR}^{24}\text{R}^{25}$  and  $-\text{NR}^{26}\text{COR}^{27}$  (wherein  $\text{R}^{24}$ ,  $\text{R}^{25}$ ,  $\text{R}^{26}$  and  $\text{R}^{27}$ , which may be the same or different, each represents hydrogen,  $\text{C}_{1-3}$ alkyl or  $\text{C}_{1-3}$ alkoxy $\text{C}_{2-3}$ alkyl));
- 15

with the proviso that at least two of  $\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$  are  $\text{C}_{1-7}$ alkyl;

$\text{R}^4$ ,  $\text{R}^5$  and  $\text{R}^6$  are each independently selected from:

- 20 hydrogen,  $-\text{OPO}_3\text{H}_2$ , phosphonate, cyano, halogeno, nitro, amino, carboxy, carbamoyl, hydroxy,  $\text{C}_{1-7}$ alkoxy,  $\text{C}_{1-7}$ alkanoyl,  $\text{C}_{1-7}$ thioalkoxy,  $\text{C}_{1-7}$ alkyl,
- (which alkyl group may bear one or more substituents selected from:
- halogeno, amino,  $\text{C}_{1-4}$ alkylamino,  $\text{di}(\text{C}_{1-4}$ alkyl)amino, hydroxy,  $\text{C}_{1-4}$ alkoxy,  $\text{C}_{1-4}$ alkylsulphanyl,  $\text{C}_{1-4}$ alkylsulphonyl,  $\text{C}_{1-4}$ alkoxycarbonylamino,  $\text{C}_{1-4}$ alkanoyl, carboxy,
- 25 phenyl, sulphate, phosphate and a group  $-\text{Y}^3\text{R}^{28}$  (wherein  $\text{Y}^3$  is  $-\text{NR}^{29}\text{C}(\text{O})-$  or  $-\text{O}-\text{C}(\text{O})-$  (wherein  $\text{R}^{29}$  represents hydrogen,  $\text{C}_{1-3}$ alkyl or  $\text{C}_{1-3}$ alkoxy $\text{C}_{2-3}$ alkyl) and  $\text{R}^{28}$  is  $\text{C}_{1-7}$ alkyl,  $\text{C}_{3-7}$ cycloalkyl or a group  $\text{R}^{30}$  wherein  $\text{R}^{30}$  is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear
- 30 one or more substituents selected from hydroxy, nitro, halogeno, amino,  $\text{C}_{1-4}$ alkyl,  $\text{C}_{1-4}$ haloalkyl,  $\text{C}_{1-4}$ alkoxy,  $\text{C}_{1-4}$ hydroxyalkyl,  $\text{C}_{1-4}$ aminoalkyl,  $\text{C}_{1-4}$ alkylamino,  $\text{C}_{1-4}$ hydroxyalkoxy, carboxy, cyano,  $-\text{CONR}^{31}\text{R}^{32}$  and  $-\text{NR}^{31}\text{COR}^{32}$  (wherein  $\text{R}^{31}$ ,  $\text{R}^{32}$ ,  $\text{R}^{33}$  and

$R^{34}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl)), and

a group  $-Y^4R^{35}$

(wherein  $Y^4$  is  $-C(O)-$ ,  $-OC(O)-$ ,  $-O-$ ,  $-SO-$ ,  $-SO_2-$ ,  $-OSO_2-$ ,  $-NR^{36}-$ ,  $-C_{1-4}$ alkyl $NR^{36}-$ ,  $-C_{1-4}$ alkyl $C(O)-$ ,  $-NR^{37}C(O)-$ ,  $-OC(O)O-$ ,  $-C(O)NR^{38}-$  or  $-NR^{39}C(O)O-$  (wherein  $R^{36}$ ,  $R^{37}$ ,  $R^{38}$  and  $R^{39}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and

$R^{35}$  is a sugar moiety, a mono-peptide, a di-peptide, a tri-peptide, a tetra-peptide, sulphate, hydroxy, amino,  $C_{1-7}$ alkyl,  $C_{1-7}$ alkoxy,  $C_{1-7}$ alkanoyl,  $C_{1-7}$ alkylamino,  $di(C_{1-7}$ alkyl)amino, amino $C_{1-7}$ alkylamino,  $C_{1-7}$ alkylamino $C_{1-7}$ alkylamino,  $C_{1-7}$ alkanoylamino $C_{1-7}$ alkyl,  $di(C_{1-7}$ alkyl)amino $C_{1-7}$ alkylamino,  $C_{1-7}$ alkylphosphate,  $C_{1-7}$ alkylphosphonate,  $C_{1-7}$ alkylcarbamoyl $C_{1-7}$ alkyl,

(which alkyl, alkoxy, alkanoyl, alkylamino, dialkylamino, aminoalkylamino, alkylaminoalkylamino, alkanoylaminoalkyl, dialkylaminoalkylamino, alkylphosphate, alkylphosphonate or alkylcarbamoylalkyl, may bear one or more substituents selected from:

halogeno, amino,  $C_{1-4}$ alkylamino,  $di(C_{1-4}$ alkyl)amino, hydroxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkylsulphanyl,  $C_{1-4}$ alkylsulphonyl,  $C_{1-4}$ alkoxycarbonylamino,  $C_{1-4}$ alkanoyl, carboxy, phenyl, nitro, sulphate, phosphate and a group  $-Y^5R^{40}$  (wherein  $Y^5$  is  $-NR^{41}C(O)-$ ,  $-C(O)NR^{42}-$ ,  $-C(O)-O-$  or  $-O-C(O)-$  (wherein  $R^{41}$  and  $R^{42}$  which may be the same or different each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and  $R^{40}$  is  $C_{1-7}$ alkyl,  $C_{3-7}$ cycloalkyl, carboxy $C_{1-7}$ alkyl or a group  $R^{43}$  wherein  $R^{43}$  is a phenyl group, a benzyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl, benzyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino,  $C_{1-4}$ alkyl,  $C_{1-4}$ haloalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ aminoalkyl,  $C_{1-4}$ alkylamino,  $C_{1-4}$ hydroxyalkoxy, carboxy, cyano,  $-CONR^{44}R^{45}$  and  $-NR^{46}COR^{47}$  (wherein  $R^{44}$ ,  $R^{45}$ ,  $R^{46}$  and  $R^{47}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl))),

$R^{48}$  (wherein  $R^{48}$  is a phenyl group, a benzyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected

independently from O, N and S, which phenyl, benzyl or aromatic heterocyclic group may bear one or more substituents selected from

hydroxy, nitro, halogeno, amino, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>aminoalkyl, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, di(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkyl, di(C<sub>1-4</sub>hydroxyalkyl)aminoC<sub>1-4</sub>alkyl, di(C<sub>1-4</sub>aminoalkyl)aminoC<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkoxy, carboxy, C<sub>1-4</sub>carboxyalkyl, phenyl, cyano, -CONR<sup>49</sup>R<sup>50</sup>, -NR<sup>51</sup>COR<sup>52</sup> (wherein R<sup>49</sup>, R<sup>50</sup>, R<sup>51</sup> and R<sup>52</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and C<sub>1-4</sub>alkylR<sup>53</sup> (wherein R<sup>53</sup> is as defined herein),

C<sub>1-7</sub>alkylR<sup>48</sup> (wherein R<sup>48</sup> is as defined herein),

R<sup>53</sup> (wherein R<sup>53</sup> is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, halogeno, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>carboxyalkyl, C<sub>1-4</sub>aminoalkyl, di(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkylsulphonylC<sub>1-4</sub>alkyl and R<sup>54</sup> (wherein R<sup>54</sup> is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

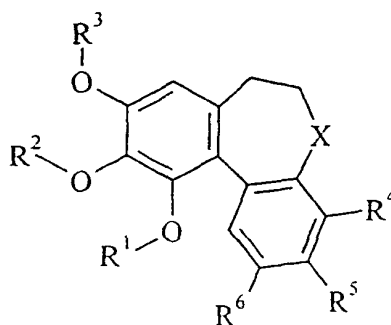
oxo, hydroxy, halogeno, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl and C<sub>1-4</sub>alkylsulphonylC<sub>1-4</sub>alkyl)), or

(CH<sub>2</sub>)<sub>a</sub>Y<sup>6</sup>(CH<sub>2</sub>)<sub>b</sub>R<sup>53</sup> (wherein R<sup>53</sup> is as defined herein, a is 0, or an integer 1-4, b is 0 or an integer 1-4 and Y<sup>6</sup> represents a direct bond, -O-, -C(O)-, -NR<sup>55</sup>-, -NR<sup>56</sup>C(O)- or -C(O)NR<sup>57</sup>- (wherein R<sup>55</sup>, R<sup>56</sup>, and R<sup>57</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl), and wherein one or more of the (CH<sub>2</sub>)<sub>a</sub> or (CH<sub>2</sub>)<sub>b</sub> groups may bear one or more substituents selected from hydroxy, amino and halogeno));

with the proviso that R<sup>5</sup> is not hydroxy, alkoxy, substituted alkoxy (wherein R<sup>5</sup> is Y<sup>4</sup>R<sup>35</sup> and Y<sup>4</sup> is -O- and R<sup>35</sup> is C<sub>1-7</sub>alkyl bearing one or more substituents selected from the list given herein), -OPO<sub>3</sub>H<sub>2</sub>, -O-C<sub>1-7</sub>alkanoyl or benzyloxy;

or a salt thereof, a pharmaceutically acceptable salt thereof, a solvate or hydrate thereof, or a prodrug thereof in the manufacture of a medicament for use in the production of a vascular damaging effect in warm-blooded animals such as humans.

2. A compound of the formula IIa:



(IIa)

5 wherein

X is

-C(O)-, -C(S)-, -C=NOH, or -CH(R<sup>7</sup>)- wherein R<sup>7</sup> is hydrogen, hydroxy, C<sub>1-7</sub>alkoxy, -OR<sup>8</sup> or -NR<sup>8</sup>R<sup>9</sup> (wherein R<sup>8</sup> is a group -Y<sup>1</sup>R<sup>10</sup> (wherein Y<sup>1</sup> is a direct bond, -C(O)-, -C(S)-, -S-, -C(O)O-, -C(O)NR<sup>11</sup>-, -SO<sub>2</sub>- or -SO<sub>2</sub>NR<sup>12</sup>- (wherein R<sup>11</sup> and R<sup>12</sup>, which may be the same or  
10 different, each independently represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>10</sup> is selected from one of the following nine groups:

1) hydrogen, C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl, C<sub>1-4</sub>alkylY<sup>8</sup>C<sub>1-4</sub>alkyl wherein Y<sup>8</sup> is as defined herein, or phenyl,

(which alkyl, cycloalkyl, alkylY<sup>8</sup>alkyl or phenyl group may bear one or more substituents  
15 selected from:

halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, carboxy, carbamoyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, phenyl, nitro, sulphate, phosphate,

Z<sup>1</sup> (wherein Z<sup>1</sup> represents a 5-6 membered saturated heterocyclic group (linked via  
20 carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, halogeno, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>aminoalkyl, C<sub>1-7</sub>alkanoyl, cyanoC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkylsulphonylC<sub>1-4</sub>alkyl and Z<sup>2</sup> (wherein Z<sup>2</sup> is a 5-6-membered saturated

heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms,  
25 selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, halogeno,  $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ aminoalkyl,  $C_{1-7}$ alkanoyl, cyano $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl and  $C_{1-4}$ alkylsulphonyl( $C_{1-4}$ alkyl)),

$C_{1-4}$ alkyl $Z^1$  (wherein  $Z^1$  is as defined herein), and

- 5 a group  $-Y^2R^{13}$  (wherein  $Y^2$  is  $-NR^{14}C(O)-$  or  $-O-C(O)-$  (wherein  $R^{14}$  represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and  $R^{13}$  is  $C_{1-7}$ alkyl,  $C_{3-7}$ cycloalkyl or a group  $R^{15}$  wherein  $R^{15}$  is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino,  $C_{1-4}$ alkyl,  $C_{1-4}$ haloalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ aminoalkyl,  $C_{1-4}$ alkylamino,  $C_{1-4}$ hydroxyalkoxy, carboxy, cyano,  $-CONR^{16}R^{17}$  and  $-NR^{18}COR^{19}$  (wherein  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$  and  $R^{19}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl));

- 15 2)  $R^{15}$  wherein  $R^{15}$  is as defined herein;

3)  $C_{2-7}$ alkenyl $R^{15}$  (wherein  $R^{15}$  is as defined herein);

4)  $C_{3-7}$ alkynyl $R^{15}$  (wherein  $R^{15}$  is as defined herein));

5)  $Z^1$  (wherein  $Z^1$  is as defined herein);

6)  $C_{1-7}$ alkyl $Z^1$  (wherein  $Z^1$  is as defined herein);

- 20 7)  $C_{1-7}$ alkyl $Y^8Z^1$  (wherein  $Z^1$  is as defined herein and  $Y^8$  is  $-C(O)-$ ,  $-NR^{59}C(O)-$ ,  $-NR^{59}C(O)C_{1-4}$ alkyl-,  $-C(O)NR^{60}-$  or  $-C(O)NR^{60}C_{1-4}$ alkyl-, (wherein  $R^{59}$  and  $R^{60}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl,  $C_{1-3}$ hydroxyalkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl));

8)  $(C_{1-7}alkyl)_cY^9Z^3$  (wherein  $c$  is 0 or 1,  $Z^3$  is an amino acid group and  $Y^9$  is a direct bond,  $-C(O)-$  or  $-NR^{61}-$  (wherein  $R^{61}$  is hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl)); and

- 25 9)  $C_{1-7}$ alkyl $R^{15}$  (wherein  $R^{15}$  is as defined herein);

and  $R^9$  is hydrogen,  $C_{1-7}$ alkyl or  $C_{3-7}$ cycloalkyl, which alkyl or cycloalkyl group may bear one or more substituents selected from  $C_{1-4}$ alkoxy and phenyl);

$R^1$ ,  $R^2$  and  $R^3$  are each independently

hydrogen,  $PO_3H_2$ , sulphate,  $C_{3-7}$ cycloalkyl,  $C_{2-7}$ alkenyl,  $C_{2-7}$ alkynyl,  $C_{1-7}$ alkanoyl, a group

- 30  $R^{20}C_{1-7}alkyl$  (wherein  $R^{20}$  is phenyl which may bear one or more substituents selected from  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ aminoalkyl and  $C_{1-4}$ hydroxyalkoxy),  $C_{1-7}$ alkyl or  $C_{1-7}$ alkylsulphonyl (which alkyl or alkylsulphonyl group may bear one or more substituents selected from:

- halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, carboxy, phenyl, nitro, sulphate, phosphate and a group -Y<sup>2</sup>R<sup>21</sup> (wherein Y<sup>2</sup> is -NR<sup>22</sup>C(O)- or -O-C(O)- (wherein R<sup>22</sup> represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>21</sup> is C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl or a group R<sup>23</sup> wherein R<sup>23</sup> is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>aminoalkyl, C<sub>1-4</sub>alkylamino, C<sub>1-4</sub>hydroxyalkoxy, carboxy, cyano, -CONR<sup>24</sup>R<sup>25</sup> and -NR<sup>26</sup>COR<sup>27</sup> (wherein R<sup>24</sup>, R<sup>25</sup>, R<sup>26</sup> and R<sup>27</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl));
- with the proviso that at least two of R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are C<sub>1-7</sub>alkyl;
- R<sup>4</sup> is
- hydrogen, cyano, halogeno, nitro, amino, hydroxy, C<sub>1-7</sub>alkoxy, C<sub>1-7</sub>thioalkoxy, C<sub>1-7</sub>alkanoyl or C<sub>1-7</sub>alkyl,
- (which alkyl group may bear one or more substituents selected from:
- halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, carboxy, phenyl, nitro, sulphate, phosphate and a group -Y<sup>3</sup>R<sup>28</sup> (wherein Y<sup>3</sup> is -NR<sup>29</sup>C(O)- or -O-C(O)- (wherein R<sup>29</sup> represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>28</sup> is C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl or a group R<sup>30</sup> wherein R<sup>30</sup> is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>aminoalkyl, C<sub>1-4</sub>alkylamino, C<sub>1-4</sub>hydroxyalkoxy, carboxy, cyano, -CONR<sup>31</sup>R<sup>32</sup> and -NR<sup>31</sup>COR<sup>32</sup> (wherein R<sup>31</sup>, R<sup>32</sup>, R<sup>33</sup> and R<sup>34</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl));
- R<sup>5</sup> and R<sup>6</sup> are each independently selected from
- hydrogen, -OPO<sub>3</sub>H<sub>2</sub>, phosphonate, cyano, halogeno, nitro, amino, carboxy, carbamoyl, hydroxy, C<sub>1-7</sub>alkoxy, C<sub>1-7</sub>alkanoyl, C<sub>1-7</sub>thioalkoxy, C<sub>1-7</sub>alkyl,



(which alkyl group may bear one or more substituents selected from:

halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, carboxy, phenyl, sulphate, phosphate and a group -Y<sup>3</sup>R<sup>28</sup> (wherein Y<sup>3</sup> is -NR<sup>29</sup>C(O)- or -O-C(O)- (wherein R<sup>29</sup> represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and R<sup>28</sup> is C<sub>1-7</sub>alkyl, C<sub>3-7</sub>cycloalkyl or a group R<sup>30</sup> wherein R<sup>30</sup> is a phenyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>haloalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>aminoalkyl, C<sub>1-4</sub>alkylamino, C<sub>1-4</sub>hydroxyalkoxy, carboxy, cyano, -CONR<sup>31</sup>R<sup>32</sup> and -NR<sup>31</sup>COR<sup>32</sup> (wherein R<sup>31</sup>, R<sup>32</sup>, R<sup>33</sup> and R<sup>34</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl))), and

a group -Y<sup>4</sup>R<sup>35</sup>

(wherein Y<sup>4</sup> is -C(O)-, -OC(O)-, -O-, -SO-, -SO<sub>2</sub>-, -OSO<sub>2</sub>-, -NR<sup>36</sup>-, -C<sub>1-4</sub>alkylNR<sup>36</sup>-, -C<sub>1-4</sub>alkylC(O)-, -NR<sup>37</sup>C(O)-, -OC(O)O-, -C(O)NR<sup>38</sup>- or -NR<sup>39</sup>C(O)O- (wherein R<sup>36</sup>, R<sup>37</sup>, R<sup>38</sup> and R<sup>39</sup>, which may be the same or different, each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and

R<sup>35</sup> is a sugar moiety, a mono-peptide, a di-peptide, a tri-peptide, a tetra-peptide, sulphate, hydroxy, amino, C<sub>1-7</sub>alkyl, C<sub>1-7</sub>alkoxy, C<sub>1-7</sub>alkanoyl, C<sub>1-7</sub>alkylamino, di(C<sub>1-7</sub>alkyl)amino, aminoC<sub>1-7</sub>alkylamino, C<sub>1-7</sub>alkylaminoC<sub>1-7</sub>alkylamino, C<sub>1-7</sub>alkanoylaminoC<sub>1-7</sub>alkyl, di(C<sub>1-7</sub>alkyl)aminoC<sub>1-7</sub>alkylamino, C<sub>1-7</sub>alkylphosphate, C<sub>1-7</sub>alkylphosphonate, C<sub>1-7</sub>alkylcarbamoylC<sub>1-7</sub>alkyl,

(which alkyl, alkoxy, alkanoyl, alkylamino, dialkylamino, aminoalkylamino,

alkylaminoalkylamino, alkanoylaminoalkyl, dialkylaminoalkylamino, alkylphosphate, alkylphosphonate or alkylcarbamoylalkyl, may bear one or more substituents selected from:

halogeno, amino, C<sub>1-4</sub>alkylamino, di(C<sub>1-4</sub>alkyl)amino, hydroxy, C<sub>1-4</sub>hydroxyalkyl, C<sub>1-4</sub>alkoxy, C<sub>1-4</sub>alkylsulphanyl, C<sub>1-4</sub>alkylsulphonyl, C<sub>1-4</sub>alkoxycarbonylamino, C<sub>1-4</sub>alkanoyl, carboxy, phenyl, nitro, sulphate, phosphate and a group -Y<sup>5</sup>R<sup>40</sup> (wherein Y<sup>5</sup> is -NR<sup>41</sup>C(O)-, -C(O)NR<sup>42</sup>-, -C(O)-O- or -O-C(O)- (wherein R<sup>41</sup> and R<sup>42</sup> which may be the same or different each represents hydrogen, C<sub>1-3</sub>alkyl or C<sub>1-3</sub>alkoxyC<sub>2-3</sub>alkyl) and

- $R^{40}$  is  $C_{1-7}$ alkyl,  $C_{3-7}$ cycloalkyl, carboxy $C_{1-7}$ alkyl or a group  $R^{43}$  wherein  $R^{43}$  is a phenyl group, a benzyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl, benzyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino,  $C_{1-4}$ alkyl,  $C_{1-4}$ haloalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ aminoalkyl,  $C_{1-4}$ alkylamino,  $C_{1-4}$ hydroxyalkoxy, carboxy, cyano,  $-\text{CONR}^{44}\text{R}^{45}$  and  $-\text{NR}^{46}\text{COR}^{47}$  (wherein  $R^{44}$ ,  $R^{45}$ ,  $R^{46}$  and  $R^{47}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl))),
- $R^{48}$  (wherein  $R^{48}$  is a phenyl group, a benzyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl, benzyl or aromatic heterocyclic group may bear one or more substituents selected from hydroxy, nitro, halogeno, amino,  $C_{1-4}$ alkyl,  $C_{1-4}$ haloalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ aminoalkyl,  $C_{1-4}$ alkylamino, di( $C_{1-4}$ alkyl)amino, di( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkyl, di( $C_{1-4}$ hydroxyalkyl)amino $C_{1-4}$ alkyl, di( $C_{1-4}$ aminoalkyl)amino $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkoxy, carboxy,  $C_{1-4}$ carboxyalkyl, phenyl, cyano,  $-\text{CONR}^{49}\text{R}^{50}$ ,  $-\text{NR}^{51}\text{COR}^{52}$  (wherein  $R^{49}$ ,  $R^{50}$ ,  $R^{51}$  and  $R^{52}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and  $C_{1-4}$ alkyl $R^{53}$  (wherein  $R^{53}$  is as defined herein),
- $C_{1-7}$ alkyl $R^{48}$  (wherein  $R^{48}$  is as defined herein),
- $R^{53}$  (wherein  $R^{53}$  is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno,  $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ carboxyalkyl,  $C_{1-4}$ aminoalkyl, di( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkylsulphonyl $C_{1-4}$ alkyl and  $R^{54}$  (wherein  $R^{54}$  is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which heterocyclic group may bear 1 or 2 substituents selected from oxo, hydroxy, halogeno,  $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl and  $C_{1-4}$ alkylsulphonyl( $C_{1-4}$ alkyl))), or
- $(\text{CH}_2)_a\text{Y}^6(\text{CH}_2)_b\text{R}^{53}$  (wherein  $R^{53}$  is as defined herein,  $a$  is 0, or an integer 1-4,  $b$  is 0 or an integer 1-4 and  $\text{Y}^6$  represents a direct bond,  $-\text{O}-$ ,  $-\text{C}(\text{O})-$ ,  $-\text{NR}^{55}-$ ,  $-\text{NR}^{56}\text{C}(\text{O})-$  or -

$C(O)NR^{57}$ - (wherein  $R^{55}$ ,  $R^{56}$ , and  $R^{57}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl), and wherein one or more of the  $(CH_2)_a$  or  $(CH_2)_b$  groups may bear one or more substituents selected from hydroxy, amino and halogeno));

5 with the proviso that  $R^5$  is not hydroxy, alkoxy, substituted alkoxy (wherein  $R^5$  is  $Y^4R^{35}$  and  $Y^4$  is -O- and  $R^{35}$  is  $C_{1-7}$ alkyl bearing one or more substituents selected from the list given herein), - $OPO_3H_2$ , - $O-C_{1-7}$ alkanoyl or benzyloxy;

with the further proviso that at least one of  $R^5$  or  $R^6$  is a group - $Y^4R^{35}$  (wherein  $Y^4$  and  $R^{35}$  are as defined herein) but with the further provisos

10 that when  $R^5$  is - $Y^4R^{35}$  and  $R^6$  is hydrogen, hydroxy, methoxy or methoxycarbonyl, - $Y^4R^{35}$  is not selected from cases wherein:

$Y^4$  is - $C(O)$ -, - $OC(O)$ -, -O-, - $SO$ -, - $OSO_2$ -, - $NR^{36}$ -, - $NR^{37}C(O)$ - or - $C(O)NR^{38}$ - (wherein  $R^{36}$ ,  $R^{37}$  and  $R^{38}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and  $R^{35}$  is

15 a glycine, valine or lysine group, a dipeptide of glycine and valine groups,  $C_{1-7}$ alkyl,  $C_{1-7}$ alkoxy,  $C_{1-7}$ alkanoyl,

(which alkyl, alkoxy or alkanoyl may bear one or more substituents selected from: halogeno, hydroxy, and a group - $Y^5R^{40}$  (wherein  $Y^5$  is - $O-C(O)$ - and  $R^{40}$  is  $C_{1-7}$ alkyl)), or

20  $R^{48}$  (wherein  $R^{48}$  is a tetrazolyl group (which may or may not be substituted as herein defined), a phenyl group or a benzyl group which phenyl or benzyl group may bear one or more substituents selected from  $C_{1-4}$ alkyl); and

that when  $R^6$  is - $Y^4R^{35}$  and  $R^5$  is hydrogen, hydroxy, methoxy or methoxycarbonyl, - $Y^4R^{35}$  is not selected from cases wherein:

25  $Y^4$  is - $C(O)$ -, -O- or - $OSO_2$ - and  $R^{35}$  is  $C_{1-7}$ alkyl,  $C_{1-7}$ alkoxy

(which alkyl, alkoxy or alkanoyl may bear one or more substituents selected from: halogeno),

30  $R^{48}$  (wherein  $R^{48}$  is a benzyl group which benzyl group may bear one or more substituents selected from  $C_{1-4}$ alkyl), or

$R^{53}$  (wherein  $R^{53}$  is piperidiny);

or a salt thereof.

3. The use of a compound of the formula IIa as defined in claim 2, or a salt thereof, a pharmaceutically acceptable salt thereof, a solvate or hydrate thereof, or a prodrug thereof, in the manufacture of a medicament for use in the production of a vascular damaging effect in warm-blooded animals such as humans.
4. A compound according to claim 2 wherein X is  $-\text{CH}(\text{R}^7)-$  wherein  $\text{R}^7$  is  $-\text{OR}^8$  or  $-\text{NR}^8\text{R}^9$  (wherein  $\text{R}^8$  is a group  $-\text{Y}^1\text{R}^{10}$  (wherein  $\text{Y}^1$  is  $-\text{C}(\text{O})-$ ,  $-\text{C}(\text{O})\text{O}-$  or  $-\text{C}(\text{O})\text{NR}^{11}-$  (wherein  $\text{R}^{11}$  represents hydrogen,  $\text{C}_{1-3}\text{alkyl}$  or  $\text{C}_{1-3}\text{alkoxyC}_{2-3}\text{alkyl}$ ) and  $\text{R}^{10}$  is as defined in claim 2) and  $\text{R}^9$  is as defined in claim 2).
5. A compound according to claim 2 or claim 4 wherein  $\text{R}^1$ ,  $\text{R}^2$  and  $\text{R}^3$  are each methyl.
6. A compound according to any one of claims 2, 4 or 5 wherein  $\text{R}^4$  is hydrogen.
7. A compound according to any one of claims 2, 4, 5 or 6 wherein  $\text{R}^6$  is hydrogen, halogeno, amino, carboxy, hydroxy,  $\text{C}_{1-7}\text{alkoxy}$  or a group  $\text{Y}^4\text{R}^{35}$  (wherein  $\text{Y}^4$  is  $-\text{C}(\text{O})-$ ,  $-\text{O}-$  or  $-\text{OSO}_2-$  and  $\text{R}^{35}$  is  $\text{C}_{1-7}\text{alkyl}$ ,  $\text{C}_{1-7}\text{alkoxy}$  (which alkyl or alkoxy may bear one or more substituents selected from halogeno),  $\text{R}^{48}$  (wherein  $\text{R}^{48}$  is a benzyl group) or  $\text{R}^{53}$  (wherein  $\text{R}^{53}$  is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms selected independently from O, S and N)).
8. A compound according to any one of claims 2, 4, 5, 6 or 7 wherein  $\text{R}^6$  is hydrogen,  $\text{C}(\text{O})\text{OCH}_3$  or methoxy.
9. A compound according to any one of claims 2, 4, 5, 6, 7 or 8 wherein  $\text{R}^5$  is hydrogen, halogeno, amino, carboxy, carbamoyl,  $\text{C}_{1-7}\text{alkanoyl}$ ,  $\text{C}_{1-7}\text{thioalkoxy}$ , or a group  $-\text{Y}^4\text{R}^{35}$  (wherein  $\text{Y}^4$  is  $-\text{C}(\text{O})-$ ,  $-\text{OC}(\text{O})-$ ,  $-\text{O}-$ ,  $-\text{SO}-$ ,  $-\text{OSO}_2-$ ,  $-\text{NR}^{36}-$ ,  $-\text{NR}^{37}\text{C}(\text{O})-$  or  $-\text{C}(\text{O})\text{NR}^{38}-$  (wherein  $\text{R}^{36}$ ,  $\text{R}^{37}$  and  $\text{R}^{38}$ , which may be the same or different, each represents hydrogen,  $\text{C}_{1-3}\text{alkyl}$  or  $\text{C}_{1-3}\text{alkoxyC}_{2-3}\text{alkyl}$ ) and

*Cont*  
*al*

$R^{35}$  is a sugar moiety, a mono-peptide, a di-peptide, a tri-peptide, a tetra-peptide,  $C_{1-7}$ alkyl,  $C_{1-7}$ alkoxy,  $C_{1-7}$ alkanoyl,  $C_{1-7}$ alkanoylamino $C_{1-7}$ alkyl,

(which alkyl, alkoxy, alkanoyl, alkanoylaminoalkyl may bear one or more substituents selected from:

5 halogeno, amino, hydroxy, carboxy, and a group  $-Y^5R^{40}$  (wherein  $Y^5$  is  $-C(O)-O-$  or  $-O-C(O)-$  and  $R^{40}$  is  $C_{1-7}$ alkyl or a group  $R^{43}$  wherein  $R^{43}$  is a benzyl group),

$R^{48}$  (wherein  $R^{48}$  is a phenyl group, a benzyl group or a 5-10-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-4 heteroatoms selected independently from O, N and S, which phenyl, benzyl or aromatic heterocyclic group may

10 bear one or more substituents selected from

hydroxy, fluoro, amino,  $C_{1-4}$ alkoxy,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ aminoalkyl,  $C_{1-4}$ alkylamino, di( $C_{1-4}$ alkyl)amino, di( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkyl, di( $C_{1-4}$ hydroxyalkyl)amino $C_{1-4}$ alkyl, di( $C_{1-4}$ aminoalkyl)amino $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkoxy, carboxy,  $C_{1-4}$ carboxyalkyl, cyano,  $-CONR^{49}R^{50}$ ,  $-NR^{51}COR^{52}$  (wherein  $R^{49}$ ,  $R^{50}$ ,  $R^{51}$  and  $R^{52}$ , which may be the

15 same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl) and  $C_{1-4}$ alkyl $R^{53}$  (wherein  $R^{53}$  is as defined herein),

$C_{1-7}$ alkyl $R^{48}$  (wherein  $R^{48}$  is as defined herein),

$R^{53}$  (wherein  $R^{53}$  is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N, which

20 heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, fluoro, chloro,  $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ carboxyalkyl,  $C_{1-4}$ aminoalkyl, di( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkylsulphonyl $C_{1-4}$ alkyl and  $R^{54}$  (wherein  $R^{54}$  is a 5-6-membered saturated heterocyclic group (linked via carbon or nitrogen) with 1-2 heteroatoms, selected independently from O, S and N,

25 which heterocyclic group may bear 1 or 2 substituents selected from

oxo, hydroxy, halogeno,  $C_{1-4}$ alkyl,  $C_{1-4}$ hydroxyalkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl and  $C_{1-4}$ alkylsulphonyl $C_{1-4}$ alkyl)), or

$(CH_2)_aY^6(CH_2)_bR^{53}$  (wherein  $R^{53}$  is as defined herein, a is 0, or an integer 1-4, b is 0 or an integer 1-4 and  $Y^6$  represents a direct bond,  $-O-$ ,  $-C(O)-$ ,  $-NR^{55}-$ ,  $-NR^{56}C(O)-$  or -

30  $C(O)NR^{57}-$  (wherein  $R^{55}$ ,  $R^{56}$ , and  $R^{57}$ , which may be the same or different, each represents hydrogen,  $C_{1-3}$ alkyl or  $C_{1-3}$ alkoxy $C_{2-3}$ alkyl), and wherein one or more of the  $(CH_2)_a$  or

(CH<sub>2</sub>)<sub>6</sub> groups may bear one or more substituents selected from hydroxy, amino and halogeno));

with the proviso that R<sup>5</sup> is not alkoxy, substituted alkoxy (wherein R<sup>5</sup> is Y<sup>4</sup>R<sup>35</sup> and Y<sup>4</sup> is -O- and R<sup>35</sup> is C<sub>1-7</sub>alkyl bearing one or more substituents selected from the list given herein), -O-

5 C<sub>1-7</sub>alkanoyl or benzyloxy.

10. A compound according to claim 2 selected from:

(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-yl 3-  
{[(2*R*)-2,6-diaminohexanoyl]amino} propanoate,

10 (5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-yl 3-[(2-  
aminoacetyl)amino]propanoate,

*N*-{[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-  
yl]oxymethyl}-2-morpholinoacetamide,

(2*S*,3*S*,4*S*,5*R*,6*R*)-6-{[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-  
15 dibenzo[*a,c*]cyclohepten-3-yl]oxy}-3,4,5-trihydroxytetrahydro-2*H*-pyran-2-carboxylic acid,  
*N*-{[(5*S*)-3-(4-{4-methylpiperazin-1-ylmethyl}phenylcarbonyloxy)-9,10,11-trimethoxy-6,7-  
dihydro-5*H*-dibenzo[*a,c*]cyclohepten-5-yl]acetamide,

*N*-{[(5*S*)-3-(4-{morpholinomethyl}phenylcarbonyloxy)-9,10,11-trimethoxy-6,7-dihydro-5*H*-  
dibenzo[*a,c*]cyclohepten-5-yl]acetamide,  
20 (5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-yl 3-[4-  
methylpiperazin-1-ylcarbonyl]propanoate,

5-{[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-  
yl]oxycarbonyl]pentanoic acid,

4-(3-[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-  
25 yl]oxy-3-oxopropyl)benzoic acid and

(2*S*)-*N*-{[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-  
yl]-2-amino-3-hydroxypropanamide,  
and salts thereof.

30 11. A compound according to claim 2 selected from

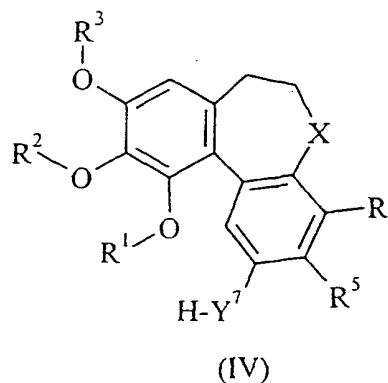
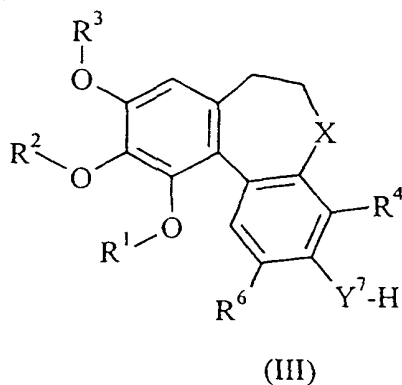
*N*-{[(5*S*)-3-(4-{4-methylpiperazin-1-ylmethyl}phenylcarbonyloxy)-9,10,11-trimethoxy-6,7-  
dihydro-5*H*-dibenzo[*a,c*]cyclohepten-5-yl]acetamide and

(2*S*)-*N*-[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-yl]-2-amino-3-hydroxypropanamide,  
and salts thereof.

- 5 12. A compound according to claim 2 selected from  
(2*S*)-*N*-[(5*S*)-5-(acetylamino)-9,10,11-trimethoxy-6,7-dihydro-5*H*-dibenzo[*a,c*]cyclohepten-3-yl]-2-amino-5-[(2-nitroethanimidoyl)amino]pentanamide  
and salts thereof.

- 10 13. A process for the manufacture of a compound of formula IIa as defined in claim 2 which comprises:

(a) for the preparation of compounds of formula IIa and salts thereof in which R<sup>5</sup> or R<sup>6</sup> is a group Y<sup>4</sup>R<sup>35</sup> (wherein R<sup>35</sup> is as defined in claim 2 and Y<sup>4</sup> is a group -OC(O)- or -NHC(O)-), the reaction of a compound of formula III or IV:



(wherein X, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> are as defined in claim 2 and Y<sup>7</sup> is -O- or -NH-), by acylation or coupling reactions;

- 20 (b) for the preparation of compounds of formula IIa and salts thereof in which R<sup>5</sup> or R<sup>6</sup> is a group Y<sup>4</sup>R<sup>35</sup> (wherein R<sup>35</sup> is C<sub>1-7</sub>alkoxy which may be substituted as defined in claim 2 and Y<sup>4</sup> is a group -OC(O)- or -NHC(O)-), the reaction of a compound of formula III and IV, by acylation reactions;
- (c) for the preparation of compounds of formula IIa and salts thereof in which R<sup>5</sup> or R<sup>6</sup> is a  
25 group Y<sup>4</sup>R<sup>35</sup> (wherein R<sup>35</sup> is aminoC<sub>1-7</sub>alkylamino, C<sub>1-7</sub>alkylaminoC<sub>1-7</sub>alkylamino, di(C<sub>1-7</sub>alkyl)aminoC<sub>1-7</sub>alkylamino and may be substituted as defined in claim 2, or is R<sup>53</sup> (wherein

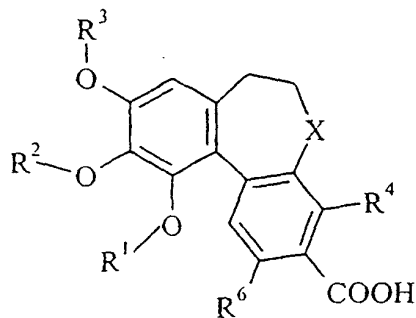
$R^{53}$  is as defined in claim 2) and  $Y^4$  is a group  $-OC(O)-$  or  $-NHC(O)-$ , can be prepared by the reaction of a compound of formula III or IV, acylation reactions;

(d) for the preparation of compounds of formula IIa and salts thereof in which  $R^5$  or  $R^6$  is a group  $Y^4R^{35}$  (wherein  $R^{35}$  is a sugar moiety and  $Y^4$  is a group  $-O-$  or  $-NH-$ ), the reaction of a compound of formula III or IV, glycosylation reactions;

(e) for the preparation of compounds of formula IIa and salts thereof in which  $R^5$  or  $R^6$  is a group  $Y^4R^{35}$  (wherein  $R^{35}$  is sulphate and  $Y^4$  is a group  $-O-$  or  $-NH-$ ), the reaction of a compound of formula III or IV, by sulphonylation reactions;

(f) for the preparation of compounds of formula IIa and salts thereof in which  $R^5$  or  $R^6$  is a group  $Y^4R^{35}$  (wherein  $R^{35}$  is  $C_{1-7}$ alkylphosphate and may be substituted as defined in claim 2 and  $Y^4$  is a group  $-O-$  or  $-NH-$ ), the reaction of a compound of formula III or IV, by phosphorylation reactions;

(g) for the preparation of compounds of formula IIa and salts thereof in which  $R^5$  is amino the reaction of a carboxylic acid of formula V:



(V)

(wherein  $X$ ,  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^6$  are as defined in claim 2) via Curtius rearrangement and hydrolysis; and

(h) for the preparation of compounds of formula IIa and salts thereof in which  $R^5$  or  $R^6$  is chloro the reaction of a compound of formula III or IV by the Sandmeyer reaction; and when a pharmaceutically acceptable salt of a compound of formula IIa is required, reaction of the compound obtained with an acid or base whereby to obtain the desired pharmaceutically acceptable salt.



- [illegible]